



# AFCTN Test Report 93-025

AFCTB-ID  
92-001



## Technical Publication Transfer Test

Using:

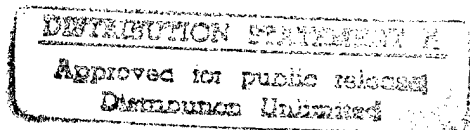
Alliant Techsystems, Inc. Data



MIL-M-28001A (SGML)  
MIL-D-28003 (CGM)



Quick Short Test Report



09 September 1992

19960822 194

Prepared for  
Electronic Systems Center

DTIC QUALITY INSPECTED 3



**Technical Publication Transfer Test**

**Using:**

**Alliant Techsystems Inc Data**

**MIL-M-28001A (SGML)**

**MIL-D-28003 (CGM)**

**Quick Short Test Report**

**9 January 1992**

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**DTIC QUALITY INSPECTED 8**

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## Contents

1.	Introduction.....	1
1.1.	Background.....	1
1.2.	Purpose.....	2
2.	Test Parameters.....	3
3.	1840A Analysis.....	5
3.1.	External Packaging.....	5
3.2.	Transmission Envelope.....	5
3.2.1.	Tape Formats.....	5
3.2.2.	Declaration and Header Fields.....	6
4.	IGES Analysis.....	6
5.	SGML Analysis.....	6
6.	Raster Analysis.....	8
7.	CGM Analysis.....	8
8.	Conclusions and Recommendations.....	10
9.	Appendix A - Tapetool Report Logs.....	11
9.1.	Tape Catalog.....	11
9.2.	Tape Evaluation Log.....	12
9.3.	Tape File Set Validation Log.....	19
10.	Appendix B - SGML Parser Logs.....	22
10.1.	XGML Parser Log.....	22
11.	Appendix C - CGM Logs.....	25
11.1.	D001C001.....	25

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11.1.1. D001C001 - MetaCHECK Parser Log.....	25
11.2. D001C001 - CGM-View.....	29
11.3. D001C001 - Harvard Graphics.....	30
11.4. D001C002.....	31
11.4.1. D001C002 - MetaChek Parser Log.....	31
11.5. D001C002 - CGM-View.....	33
11.6. D001C002 - Harvard Graphics.....	34

## 1. Introduction

### 1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-Cycle support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

## 1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Alliant Techsystems Inc's interpretation and use of the CALS standards, in transferring technical publication data. Alliant Techsystems used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff on a 9-track magnetic tape.

## 2. Test Parameters

**Test Plan:** AFCTB 92-001

**Date of  
Evaluation:** 9 January 1992

**Evaluator:** George Elwood  
Air Force CALS Test Bed  
HQ ESC/ENCP  
4027 Colonel Glenn Hwy  
Suite 200  
Dayton OH 45432-1672

**Data  
Originator:** Alliant Techsystems Inc  
Frank Radichel  
5901 Lincoln Drive  
Edina, MN 55436

**Data  
Description:** Technical Manual Test  
1 Document Declaration file  
1 Document Type Definitions (DTD)  
1 Text file  
2 Computer Graphics Metafile (CGM) file

**Data  
Source Systems:**

Text/Standard Generalized Markup Language (SGML)

**HARDWARE**

PC  
HP/Apollo  
VAX

**SOFTWARE**

Avalanche FASTTAG

CGM

**HARDWARE**

HP/Apollo  
VAX

**SOFTWARE**

Interleaf



**Evaluation  
Tools Used:**

**MIL-STD-1840A (TAPE)**

SUN 3/280

AFCTN Tapetool v1.2.8 UNIX

AGFA Compugraphics CALS v40.4

**MIL-M-28001 (SGML)**

Cheetah Gold 486

Exoterica XGML Normalizer v1.2e3.2

**MIL-D-28003 (CGM)**

Sun 3/60

Advanced Technology Center

(ATC) CGM-View R2.0

AGFA Compugraphics cgm2ps

Cheetah Gold 486

ATC MetaVIEW R1.12

ATC MetaCHECK R1.15

Software Publishing Corporation

(SPC) Harvard Graphics v3.0

**Standards  
Tested:**

MIL-STD-1840A

MIL-M-28001A

MIL-D-28003

### 3. 1840A Analysis

#### 3.1 External Packaging

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was marked with the magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape was enclosed in a barrier bag as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. A packing list, showing all files recorded on the tape, was not enclosed in the box as required by MIL-STD-1840A.

#### 3.2 Transmission Envelope

The 9-track tape received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

##### 3.2.1 Tape Formats

The 1840A tape was run through the AFCTN Tapetool v1.2.8 utility. Two warnings were encountered while evaluating the contents of the tape labels. Both warnings relate to the Text files, D001G001 (the DTD) and D001T001 (the SGML Text file). The reported warnings relate to the use of carriage control characters in the file. This type of error is generated when PC based software is used. These added characters did not present a problem during the evaluation in the AFCTB.

\*\*\* WARNING - This variable length record type file contained carriage control characters. Carriage control characters are used as record terminators and are interpreted differently among dissimilar systems.

The tape was read without a problem using AGFA's read1840A utility.

### 3.2.2 Declaration and Header Fields

Two errors and two notes were reported during the evaluation of the header files. These errors were reported on both of the CGM files. The errors were the use of 'NONE' for the source graph entry. This entry is normally used to identify the graphic file in the SGML document.

srcgph: NONE

\*\*\* ERROR (MIL-STD-1840A; 5.1.4.5) - Invalid value for 'srcgph:'.  
It cannot be 'NONE' for a Document with text.

\*\*\* NOTE - The 'srcgph:' value for a graphic is the  
cross-reference into the SGML Text File.

## 4. IGES Analysis

No Initial Graphics Exchange Specification (IGES) files were included on this tape.

## 5. SGML Analysis

When the DTD was parsed using Exotercia's *XGML Normalizer*, one error was reported. This error related to a partial entity reference in the DTD. The entity "shorttitleuse" without the rest of the definition. Immediately following this entity, is the entity "sect" which references "shorttitle", which has not been defined. Two lines were added to the DTD and it parsed without a problem. It was noted that the "shorttitle" entity was defined later in the DTD.

C:\XGML\XGMLNORM.EXE --

Error on line 15 in file entities/alliant.dtd:

Unable to expand entity reference.

The parameter entity 'shorttitle' is undefined.

<!-- The document prolog is in error. -->

<!ENTITY % shorttitleuse "include" >

<!-- \*\*\* The below two lines were added to parse -->

<![ %shorttitleuse; [ <!ENTITY % shorttitle "<!-- The document prolog is in error. -->" ] ]>

---

```
<!ENTITY % shorttitle "" >
```

```
<!ENTITY % sect "(title %shorttitle;; index?, para0+)" >
```

When the Text file was initially parsed using Exoterica *XGML Normalizer*, 253 errors were reported. Many of these errors were the same; an effort was made to correct them.

The first set of errors to be corrected were the graphic calls. The DTD included on the tape, did not contain any entity reference to the included CGM files. These references were made along with adding the CGM notation reference in the DTD. Because there were only two CGM files referenced, only two external entities had to be added along with the notation. These added lines are shown below.

```
<!ENTITY slm      SYSTEM 'd001c001.cgm' NDATA cgm>
```

```
<!ENTITY xblck    SYSTEM 'd001c002.cgm' NDATA cgm>
```

```
<!NOTATION cgm PUBLIC "-//USA-DOD//NOTATION Computer Graphics  
Metafile//EN"> <!-- **** Above line added to handle cgm figures  
-->
```

A Second error was noted on line 3 of the Text file. This error referenced the use of "service" versus "branch". The Text file referenced "branch" while the DTD specified "service". The related parts of the Text file and DTD are shown below. This was corrected in the Text file and the document was parsed again. This procedure resulted in 184 errors being reported.

#### THIS IS THE TEXT FILE

```
<!-- **** DTD specifies service
```

```
<doc branch="army"> -->
```

```
<doc service = "army">
```

#### THIS IS THE DTD REFERENCE

```
<!ELEMENT doc      - -      ((volume, volume+) | (docpart, docpart+) | (front,  
body, rear?))+(ftnote | pgbkr | brk) >
```

```
<!-- CHANGE 910201 - FOLLOWING ATTLIST CHANGED -->
```

```
<!ATTLIST doc      service      (%service;)  #REQUIRED
                  docid CDATA #IMPLIED
                  docstat (revision | change | prelim | draft | formal)
                  "formal" mantype (standard | card | decal) "standard"
                  %secur; >
```

Because of the number of errors remaining, no further effort was made to correct the errors. It was noted that over half of the errors related to the lack of a required TITLE in the figure group. Adding the title tag in the document or removing the title requirement in the DTD will reduced the errors to approximately 50. Due to the size, only part of Exoterica's *XGML Normalizer* parser log is included in the Appendix of this report.

## 6. Raster Analysis

No Raster files were include on this tape.

## 7. CGM Analysis

Two CGM files were included on this tape. The first was an actual file from the test document, while the second was a blank used to fill space in the document.

The files were viewed on the Sun 3/60 system using ATC's *CGM-View* software. No problems were noted during this procedure. It did appear that some parts of file D001C001 were missing. A hard copy of the file was made and is included in the Appendix of this report. It was noted during the drawing on the screen that overlays were used to hide under lying parts of the drawing. File D001C002 is a simple "X" block and no problems were noted.

The files were moved to the Cheetah for further evaluation. Both files were evaluated for MIL-D-28003 conformance using ATC's *Metacheck* software. This software reported that neither file met the CALS MIL-D-28003 specification. It further stated that the files were not valid CGM files. The complete error logs are included in the Appendix of this report.

The reported errors in file D001C001 were of two types. Most of the basic CGM errors were polylines with only one distinct ver-

tex. The CALS errors were the missing MIL-D-28003 statement and the use of illegal fonts. File D001C002 also contained these CALS errors.

Bulletin 20009: Element Class/ID: 4/1 Offset: 3106 octets Element No. 239  
Warning; POLYLINE with only one distinct vertex.

Error 6076: Element Class/ID: 4/18 Offset: 3738 octets Element No. 285  
The three specifying points of the ELLIPTICAL ARC element are invalid;  
they must be distinct points.

Error 6501: Element Class/ID: 1/2 Offset: 34 octets Element No. 3  
The METAFILE DESCRIPTION string is invalid; it lacks the phrase  
"MIL-D-28003/BASIC-1" required by the Profile.

As a final evaluation, both files were imported into SPC's Harvard Graphics v3.0. File D001Q001 was converted with errors. Three line style errors were reported along with eleven non-CGM objects. When the file was displayed on the screen, several errors were noted. File D001Q002 imported without any reported error and displayed without any noted errors. These hard copies are included in the Appendix of this report.

## 8. Conclusions and Recommendations

In summary, the MIL-STD-1840A tape from Alliant Techsystems, Inc. contained many errors. The tape could be read properly using both the AFCTN Tapetool and AGFA's read1840A software. Tapetool reported some minor errors, and the two minor reported in the MIL-STD-1840A headers could be corrected easily.

The errors with the SGML Text file were major. The initial parsing operation generated 253 errors. Sixty-nine errors were corrected by inserting the graphics notation statements in the DTD. The remaining errors were scattered throughout the document. Many of these errors relate to the graphics calls and construction of the DTD. The files do not meet the CALS MIL-M-28001A specification.

The two CGM files were reported as not meeting basic CGM requirements. While they did display, parts of file D001C001 appeared to be missing. The CGM files do not meet the CALS MIL-D-28003 specification.

This tape contained many errors in the SGML and CGM files. While this is an improvement over an earlier tape submitted by Alliant, the number and type of errors make this tape unusable. The tape does not meet the CALS MIL-STD-1840A requirements.

## 9. Appendix A - Tapetool Report Logs

### 9.1 Tape Catalog

Air Force CALS Test Network Catalog Evaluation - Version 1.2; Release Number 8

Standards referenced:

- MIL-STD-1840A (1987) - Automated Interchange of Technical Information
- MIL-R-28003 (1988) - Digital Representation For Communication Of  
Illustration Data; CGM Application Profile
- ANSI X3.27 (1987) - File Structure and Labeling of Magnetic Tapes  
for Information Interchange
- ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Thu Jan 9 08:00:32 1992

MIL-STD-1840A File Catalog

File Set Directory: /cals/tapetool8/Set047

Page: 1

File Name	File Type	Record		Selected/ Extracted
		Format/ Length	Block Length/Total	
D001	Document Declaration	D/00260	02048/000001	Extracted
D001C001	CGM	F/00080	00800/000016	Extracted
D001C002	CGM	F/00080	00800/000002	Extracted
D001G003	DTD	D/00260	02048/000021	Extracted
D001T004	Text	D/00260	02048/000049	Extracted

Catalog Process terminated normally.



## 9.2 Tape Evaluation Log

Air Force CALS Test Network Tape Evaluation - Version 1.2; Release Number 8

Standards referenced:

ANSI X3.27 (1987) - File Structure and Labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Thu Jan 9 08:00:23 1992

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1CALS01

4

Label Identifier: VOL1  
Volume Identifier: CALS01  
Volume Accessibility:  
Owner Identifier:  
Label Standard Version: 4

HDR1D001                   CALS0100010001000000 92003 00000 000000

Label Identifier: HDR1  
File Identifier: D001  
File Set Identifier: CALS01  
File Section Number: 0001  
File Sequence Number: 0001  
Generation Number: 0000  
Generation Version Number: 00  
Creation Date: 92003  
Expiration Date: 00000  
File Accessibility:  
Block Count: 000000  
Implementation Identifier:

HDR2D0204800260

00

Label Identifier: HDR2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 1.

\*\*\*\*\* Tape Mark \*\*\*\*\*

EOF1D001                    CALS0100010001000000 92003 00000 000001

Label Identifier: EOF1  
File Identifier: D001  
File Set Identifier: CALS01  
File Section Number: 0001  
File Sequence Number: 0001  
Generation Number: 0000  
Generation Version Number: 00  
Creation Date: 92003  
Expiration Date: 00000  
File Accessibility:  
Block Count: 000001  
Implementation Identifier:

EOF2D0204800260

00

Label Identifier: EOF2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

HDR1D001C001                CALS0100010002000000 92003 00000 000000

Label Identifier: HDR1  
File Identifier: D001C001  
File Set Identifier: CALS01  
File Section Number: 0001  
File Sequence Number: 0002  
Generation Number: 0000  
Generation Version Number: 00  
Creation Date: 92003  
Expiration Date: 00000  
File Accessibility:  
Block Count: 000000  
Implementation Identifier:

HDR2F0080000080

00

Label Identifier: HDR2  
Recording Format: F  
Block Length: 00800  
Record Length: 00080  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

Actual Block Size Found = 800 Bytes.

Number of data blocks read = 16.

\*\*\*\*\* Tape Mark \*\*\*\*\*

EOF1D001C001

CALS0100010002000000 92003 00000 000016

Label Identifier: EOF1  
File Identifier: D001C001  
File Set Identifier: CALS01  
File Section Number: 0001  
File Sequence Number: 0002  
Generation Number: 0000  
Generation Version Number: 00  
Creation Date: 92003  
Expiration Date: 00000  
File Accessibility:  
Block Count: 000016  
Implementation Identifier:

EOF2F0080000080

00

Label Identifier: EOF2  
Recording Format: F  
Block Length: 00800  
Record Length: 00080  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

HDR1D001C002

CALS0100010003000000 92003 00000 000000

Label Identifier: HDR1  
File Identifier: D001C002  
File Set Identifier: CALS01  
File Section Number: 0001  
File Sequence Number: 0003

Generation Number: 0000  
Generation Version Number: 00  
Creation Date: 92003  
Expiration Date: 00000  
File Accessibility:  
Block Count: 000000  
Implementation Identifier:

HDR2F00800000080

00

Label Identifier: HDR2  
Recording Format: F  
Block Length: 00800  
Record Length: 00080  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

Actual Block Size Found = 800 Bytes.

Number of data blocks read = 2.

\*\*\*\*\* Tape Mark \*\*\*\*\*

EOF1D001C002

CALS0100010003000000 92003 00000 000002

Label Identifier: EOF1  
File Identifier: D001C002  
File Set Identifier: CALS01  
File Section Number: 0001  
File Sequence Number: 0003  
Generation Number: 0000  
Generation Version Number: 00  
Creation Date: 92003  
Expiration Date: 00000  
File Accessibility:  
Block Count: 000002  
Implementation Identifier:

EOF2F00800000080

00

Label Identifier: EOF2  
Recording Format: F  
Block Length: 00800  
Record Length: 00080  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

HDR1D001G003                    CALS0100010004000000 92003 00000 000000

Label Identifier: HDR1  
File Identifier: D001G003  
File Set Identifier: CALS01  
File Section Number: 0001  
File Sequence Number: 0004  
Generation Number: 0000  
Generation Version Number: 00  
Creation Date: 92003  
Expiration Date: 00000  
File Accessibility:  
Block Count: 000000  
Implementation Identifier:

HDR2D0204800260

00

Label Identifier: HDR2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

Actual Block Size Found = 2048 Bytes.

\*\*\* WARNING - This variable length record type file contained carriage control characters. Carriage control characters are used as record terminators and are interpreted differently among dissimilar systems.

Number of data blocks read = 21.

\*\*\*\*\* Tape Mark \*\*\*\*\*

EOF1D001G003                    CALS0100010004000000 92003 00000 000021

Label Identifier: EOF1  
File Identifier: D001G003  
File Set Identifier: CALS01  
File Section Number: 0001  
File Sequence Number: 0004  
Generation Number: 0000  
Generation Version Number: 00  
Creation Date: 92003  
Expiration Date: 00000

File Accessibility:  
Block Count: 000021  
Implementation Identifier:

EOF2D0204800260

00

Label Identifier: EOF2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

HDR1D001T004

CALS0100010005000000 92003 00000 000000

Label Identifier: HDR1  
File Identifier: D001T004  
File Set Identifier: CALS01  
File Section Number: 0001  
File Sequence Number: 0005  
Generation Number: 0000  
Generation Version Number: 00  
Creation Date: 92003  
Expiration Date: 00000  
File Accessibility:  
Block Count: 000000  
Implementation Identifier:

HDR2D0204800260

00

Label Identifier: HDR2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

Actual Block Size Found = 2048 Bytes.

\*\*\* WARNING - This variable length record type file contained carriage control characters. Carriage control characters are used as record terminators and are interpreted differently among dissimilar systems.

Number of data blocks read = 49.

EOF1D001T004 CALS0100010005000000 92003 00000 000049

```
Label Identifier: EOF1
File Identifier: D001T004
File Set Identifier: CALS01
File Section Number: 0001
File Sequence Number: 0005
Generation Number: 0000
Generation Version Number: 00
Creation Date: 92003
Expiration Date: 00000
File Accessibility:
Block Count: 000049
Implementation Identifier:
```

EOF2D0204800260

00

```
Label Identifier: EOF2
Recording Format: D
Block Length: 02048
Record Length: 00260
Offset Length: 00
```

\*\*\*\*\* Tape Mark \*\*\*\*\*

\*\*\*\*\* Tape Mark \*\*\*\*\*

##### End of Volume CALS01 #####

##### End Of Tape File Set #####

```
Deallocating /dev/rmt0...
```

Tape Import Process terminated with 0 error(s), 2 warning(s), and 0 note(s).

## 9.3 Tape File Set Validation Log

Air Force CALS Test Network File Set Evaluation - Version 1.2; Release Number  
8

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information  
MIL-R-28002 (1989) - Raster Graphics Representation In Binary  
Format, Requirements For

Thu Jan 9 08:00:32 1992

MIL-STD-1840A File Set Evaluation Log

File Set: Set047

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: Alliant Techsystems Inc., 5901 Lincoln Drive, Edina, MN 55436

srcdocid: PDEP 9-1375-218-12

srcrelid: NONE

chglvl: ORIGINAL

dteis: 19911111

dstsys: Air Force CALS Test Network

dstdocid: PDEP 9-1375-218-12

dstrelid: NONE

dtetrm: 19920103

dlvacc: NONE

filcnt: C2,G1,T1

ttlcls: UNCLASSIFIED

doccls: UNCLASSIFIED

doctyp: Technical Publication

docttl: NONE

Found file: D001C001

Extracting CGM Header Records...

Evaluating CGM Header Records...

srcdocid: PDEP 9-1375-218-12

dstdocid: PDEP 9-1375-218-12

txtfilid: W

figid: NONE

srcgph: NONE

\*\*\* ERROR (MIL-STD-1840A; 5.1.4.5) - Invalid value for 'srcgph':  
It cannot be 'NONE' for a Document with text.



\*\*\* NOTE - The 'srcgph:' value for a graphic is the  
cross-reference into the SGML Text File.

doccls: UNCLASSIFIED

notes: NONE

1 error(s), 0 warning(s), and 1 note(s) were encountered  
in CGM File D001C001.

Saving CGM Header File: D001C001\_HDR

Saving CGM Data File: D001C001\_CGM

Found file: D001C002

Extracting CGM Header Records...

Evaluating CGM Header Records...

srcdocid: PDEP 9-1375-218-12

dstdocid: PDEP 9-1375-218-12

txtfilid: W

figid: NONE

srcgph: NONE

\*\*\* ERROR (MIL-STD-1840A; 5.1.4.5) - Invalid value for 'srcgph:'.  
It cannot be 'NONE' for a Document with text.

\*\*\* NOTE - The 'srcgph:' value for a graphic is the  
cross-reference into the SGML Text File.

doccls: UNCLASSIFIED

notes: NONE

1 error(s), 0 warning(s), and 1 note(s) were encountered  
in CGM File D001C002.

Saving CGM Header File: D001C002\_HDR

Saving CGM Data File: D001C002\_CGM

Found file: D001G003

Extracting DTD Header Records...

Evaluating DTD Header Records...

srcdocid: PDEP 9-1375-218-12

dstdocid: PDEP 9-1375-218-12

notes: NONE

Saving DTD Header File: D001G003\_HDR

Saving DTD Data File: D001G003\_DTD

Found file: D001T004

Renaming file from => /cals/tapetool8/Set047/D001T004

to => /cals/tapetool8/Set047/D001/D001T004

Extracting Text Header Records...

Evaluating Text Header Records...

srcdocid: PDEP 9-1375-218-12  
dstdocid: PDEP 9-1375-218-12  
txtfilid: W  
doccls: UNCLASSIFIED  
notes: NONE

Saving Text Header File: D001T004\_HDR  
Saving Text Data File: D001T004\_TXT

Evaluating numbering scheme...  
No errors were encountered during numbering scheme evaluation.  
Numbering scheme evaluation complete.

Checking file count...  
No errors were encountered during file count verification.  
File Count verification complete.

A total of 2 error(s), 0 warning(s), and 2 note(s) were  
encountered in Document D001.

A grand total of 2 error(s), 0 warning(s), and 2 note(s) were  
encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

## 10. Appendix B - SGML Parser Logs

### 10.1 XGML Parser Log

C:\XGML\XGMLNORM.EXE --

Error on line 45 in file \9201\d001t004:  
A start tag is missing that must not be omitted.  
The element is 'PARA'.

C:\XGML\XGMLNORM.EXE --

Error on line 57 in file \9201\d001t004:  
A start tag is missing that must not be omitted.  
The element is 'PARA'.

C:\XGML\XGMLNORM.EXE --

Error on line 173 in file \9201\d001t004:  
A start tag is missing that must not be omitted.  
The element is 'TITLE'.

C:\XGML\XGMLNORM.EXE --

Error on line 173 in file \9201\d001t004:  
The start tag of an empty element has been omitted.  
The element is 'TITLE'.

C:\XGML\XGMLNORM.EXE --

Error on line 461 in file \9201\d001t004:  
Unable to expand entity reference.  
The general entity 'OHgr' is undefined.

C:\XGML\XGMLNORM.EXE --

Error on line 481 in file \9201\d001t004:  
Unexpected text encountered.  
The current element is 'ROW'.  
End tags for the following elements are allowed: 'ROW', 'TBODY',  
'TGROUP', 'TABLE'.  
Start tags for the following elements are allowed: 'ENTRY', 'ENTRYTBL',  
'ROW', 'TGROUP'.  
Start tags for the following inclusions are allowed: 'BRK', 'FTNOTE',  
'PGBRK'.  
Text is not allowed.  
The extra text will be allowed anyway.

C:\XGML\XGMLNORM.EXE --

Error on line 489 in file \9201\d001t004:  
Unexpected text encountered.  
The current element is 'TBODY'.  
End tags for the following elements are allowed: 'TBODY', 'TGROUP',

'TABLE'.

Start tags for the following elements are allowed: 'ROW', 'TGROUP'.

Start tags for the following inclusions are allowed: 'BRK', 'FTNOTE',  
'PGBRK'.

Text is not allowed.

The extra text will be allowed anyway.

C:\XGML\XGMLNORM.EXE --

Error on line 497 in file \9201\d001t004:

An end tag for an element that is not open is not allowed.

The element is 'ENTRY'.

The current element is 'TBODY'.

End tags for the following elements are allowed: 'TBODY', 'TGROUP',  
'TABLE'.

Start tags for the following elements are allowed: 'ROW', 'TGROUP'.

Start tags for the following inclusions are allowed: 'BRK', 'FTNOTE',  
'PGBRK'.

Text is not allowed.

The end tag will be ignored.

C:\XGML\XGMLNORM.EXE --

Error on line 499 in file \9201\d001t004:

An end tag for an element that is not open is not allowed.

The element is 'ROW'.

The current element is 'TBODY'.

End tags for the following elements are allowed: 'TBODY', 'TGROUP',  
'TABLE'.

Start tags for the following elements are allowed: 'ROW', 'TGROUP'.

Start tags for the following inclusions are allowed: 'BRK', 'FTNOTE',  
'PGBRK'.

Text is not allowed.

The end tag will be ignored.

<<<<< PART OF LOG REMOVED HERE >>>>>

C:\XGML\XGMLNORM.EXE --

Error on line 1049 in file \9201\d001t004:

Unexpected end tag encountered. More content is required.

The end tag is for element 'PARA0'.

The current element is 'PARA0'.

End tags for the following elements are allowed: None.

Start tags for the following elements are allowed: 'PARA',  
'SHORTTITLE', 'SPECPARA'.

Start tags for the following inclusions are allowed: 'BRK', 'CHART',  
'FIGURE', 'FTNOTE', 'PGBRK', 'TABLE'.

Text is not allowed.

The element 'PARA0' will be closed anyway.

<<<< PART OF LOG REMOVED HERE >>>>

C:\XGML\XGMLNORM.EXE --  
Error on line 1247 in file \9201\d001t004:  
Unknown element name in end tag.  
There is no such element as 'RANDLITS'.  
The current element is 'RANDLIST'.  
End tags for the following elements are allowed: 'RANDLIST'.  
Start tags for the following elements are allowed: 'ITEM'.  
Start tags for the following inclusions are allowed: 'BRK', 'CHART',  
'FIGURE', 'FTNOTE', 'PGBRK', 'TABLE'.  
Text is not allowed.

<<<< PART OF LOG REMOVED HERE >>>>

C:\XGML\XGMLNORM.EXE --  
Error on line 2045 in file \9201\d001t004:  
Unexpected text encountered.  
The current element is 'THEAD'.  
End tags for the following elements are allowed: 'THEAD'.  
Start tags for the following elements are allowed: 'ROW', 'TBODY',  
'TFOOT'.  
Start tags for the following inclusions are allowed: 'BRK', 'FTNOTE',  
'PGBRK'.  
Text is not allowed.  
The extra text will be allowed anyway.

C:\XGML\XGMLNORM.EXE --  
Error on line 2047 in file \9201\d001t004:  
An end tag for an element that is not open is not allowed.  
The element is 'ENTRY'.  
The current element is 'THEAD'.  
End tags for the following elements are allowed: 'THEAD'.  
Start tags for the following elements are allowed: 'ROW', 'TBODY',  
'TFOOT'.  
Start tags for the following inclusions are allowed: 'BRK', 'FTNOTE',  
'PGBRK'.  
Text is not allowed.  
The end tag will be ignored.

<<<< PART OF LOG REMOVED HERE >>>>

C:\XGML\XGMLNORM.EXE --  
Error on line 6183 in file \9201\d001t004:  
The start tag of an empty element has been omitted.  
The element is 'TITLE'.

---

## 11. Appendix C - CGM Logs

### 11.1 D001C001

#### 11.1.1 D001C001 - MetaCHECK Parser Log

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer  
Copyright 1988-91 CGM Technology Software  
Execution Date: 01/09/92 Time: 15:44:02

Metafile Examined : \9201\d001c001.

Pictures Examined : All

Elements Examined : All

Bytes Examined : All

===== Trace Report =====

Tracing not selected.

===== CGM Conformance Violation Report =====

Bulletin 20009: Element Class/ID: 4/1 Offset: 1702 octets Element No. 118  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 1712 octets Element No. 119  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 1722 octets Element No. 120  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 1732 octets Element No. 121  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 1742 octets Element No. 122  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 1752 octets Element No. 123

Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 1762 octets Element No. 124  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 3046 octets Element No. 233  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 3056 octets Element No. 234  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 3066 octets Element No. 235  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 3076 octets Element No. 236  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 3086 octets Element No. 237  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 3096 octets Element No. 238  
Warning; POLYLINE with only one distinct vertex.

Bulletin 20009: Element Class/ID: 4/1 Offset: 3106 octets Element No. 239  
Warning; POLYLINE with only one distinct vertex.

Error 6076: Element Class/ID: 4/18 Offset: 3738 octets Element No. 285  
The three specifying points of the ELLIPTICAL ARC element are invalid;  
they must be distinct points.

Error 4011: Element Class/ID: 0/2 Offset: 11348 octets Element No. 708  
The following elements appear in this CGM and should be indicated in the  
METAFILE ELEMENT LIST:  
VDC INTEGER PRECISION

===== CALS CGM Profile (MIL-D-28003) Report =====

Error 6501: Element Class/ID: 1/2 Offset: 34 octets Element No. 3

---

The METAFILE DESCRIPTION string is invalid; it lacks the phrase  
"MIL-D-28003/BASIC-1" required by the Profile.

Error 6508: Element Class/ID: 1/13 Offset: 198 octets Element No. 15  
The FONT LIST element is invalid; it may not contain  
more than 4 font names.

Error 6509: Element Class/ID: 1/13 Offset: 198 octets Element No. 15  
Invalid list parameters; each of the Font Names in the FONT LIST element  
must be among the Font Names allowed by the Profile.

===== Conformance Summary Report =====

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer  
Copyright 1988-91 CGM Technology Software  
Execution Date: 01/09/92 Time: 15:44:06

Name of CGM under test: \9201\d001c001.  
Encoding : Binary

Pictures Examined : All  
Elements Examined : All  
Bytes Examined : All

BEGIN METAFILE string : "slam\_1.cgm from slam\_1.doc"  
METAFILE DESCRIPTION : "Interleaf Inc. MDL/G CGM 1990"

Picture 1 starts at octet offset 622; string contains: "frame"

Conformance Summary : This file is not a conforming CGM.

Consequently, it does not meet the  
CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

1 Pictures Tested  
708 Elements Tested  
11350 Octets Tested

0 Illegal CGM Elements	1000 -	1999
0 Incorrect CGM Element Lengths	2000 -	2999
0 CGM State Errors	3000 -	3499

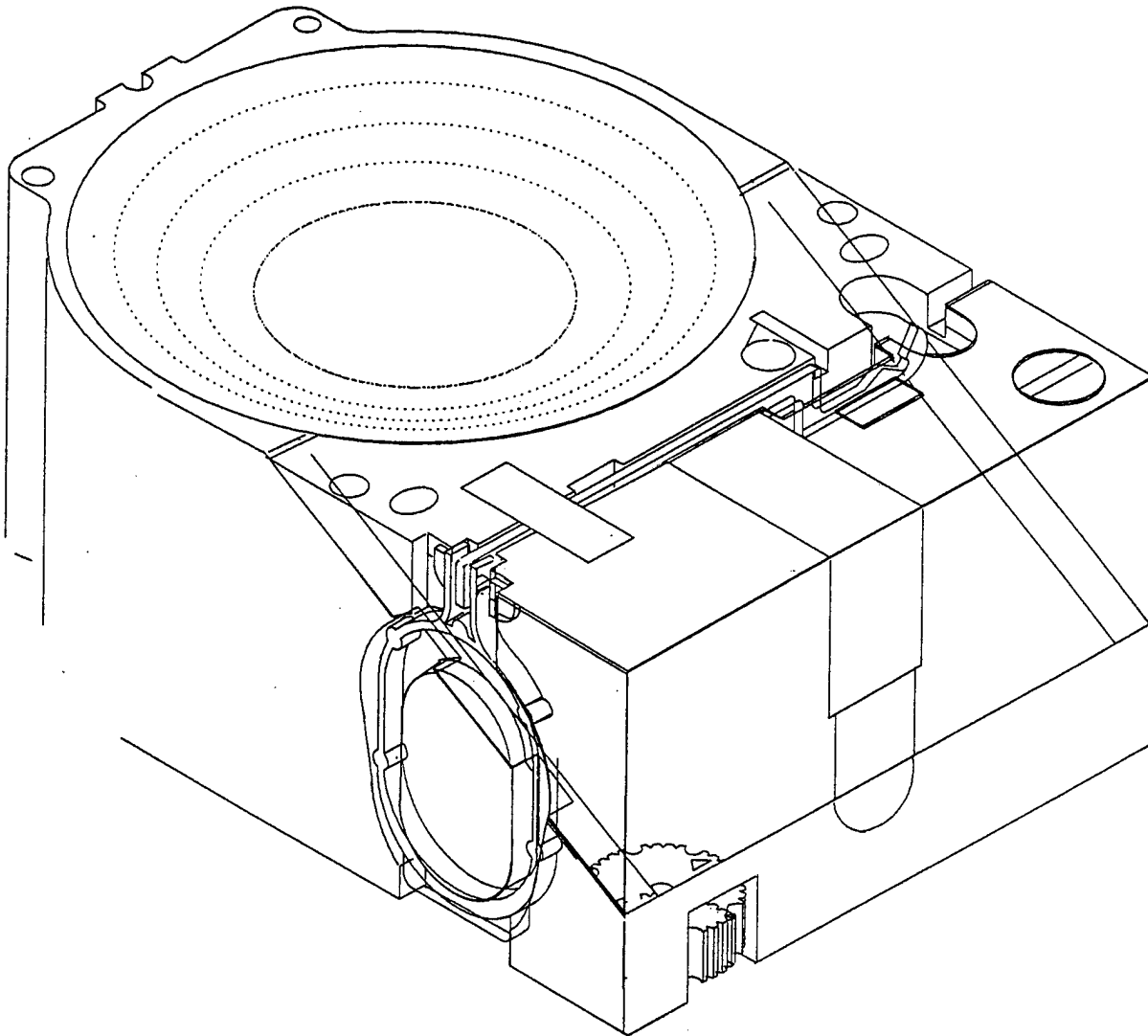


1 Required CGM Elements Missing or Wrong	4000 -	4499
1 CGM Parameter Values Out of Range	6000 -	6499
0 CGM Structure Errors	7000 -	7499
2 *** CGM Errors Found (total) ***		
0 Profile State Errors	3500 -	3999
0 Illegal Profile Elements	4500 -	4999
3 Profile Parameter Values Out of Range	6500 -	6999
0 Profile Data Limits Exceeded	8500 -	8999
0 Other Profile Constraints Violated	9500 -	9999
3 *** Profile Violations Found (total) ***		
14 Warnings (Advisory Remarks)	20000 -	20999

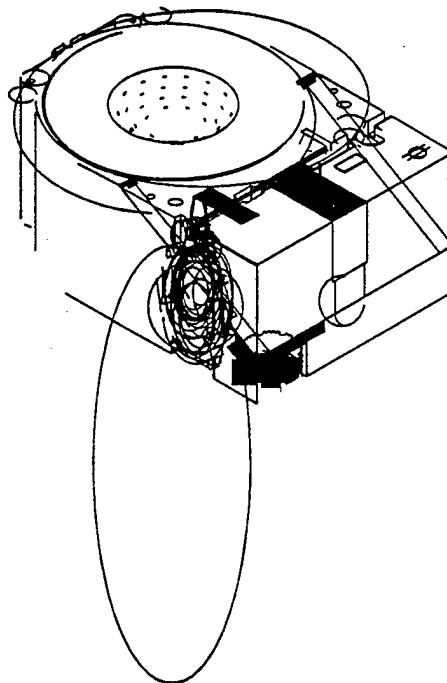
6 distinct errors and warnings were reported.

===== End of Conformance Report =====

## 11.2 D001C001 - CGM-View



### 11.3 D001C001 - Harvard Graphics



## 11.4 D001C002

### 11.4.1 D001C002 - MetaCHECK Parser Log

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer  
Copyright 1988-91 CGM Technology Software  
Execution Date: 01/09/92 Time: 15:44:18

Metafile Examined : \9201\d001c002.

Pictures Examined : All  
Elements Examined : All  
Bytes Examined : All

===== Trace Report =====

Tracing not selected.

===== CGM Conformance Violation Report =====

Error 4011: Element Class/ID: 0/2 Offset: 774 octets Element No. 35  
The following elements appear in this CGM and should be indicated in the  
METAFILE ELEMENT LIST:  
VDC INTEGER PRECISION

===== CALS CGM Profile (MIL-D-28003) Report =====

Error 6501: Element Class/ID: 1/2 Offset: 40 octets Element No. 3  
The METAFILE DESCRIPTION string is invalid; it lacks the phrase  
"MIL-D-28003/BASIC-1" required by the Profile.

Error 6508: Element Class/ID: 1/13 Offset: 204 octets Element No. 15  
The FONT LIST element is invalid; it may not contain  
more than 4 font names.

Error 6509: Element Class/ID: 1/13 Offset: 204 octets Element No. 15  
Invalid list parameters; each of the Font Names in the FONT LIST element  
must be among the Font Names allowed by the Profile.

===== Conformance Summary Report =====

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer

Copyright 1988-91 CGM Technology Software  
Execution Date: 01/09/92 Time: 15:44:20

Name of CGM under test: \9201\d001c002.

Encoding : Binary

Pictures Examined : All  
Elements Examined : All  
Bytes Examined : All

BEGIN METAFILE string : "document.cgm from document.doc"  
METAFILE DESCRIPTION : "Interleaf Inc. MDL/G CGM 1990"

Picture 1 starts at octet offset 628; string contains: "fullpage"

Conformance Summary : This file is not a conforming CGM.

Consequently, it does not meet the  
CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

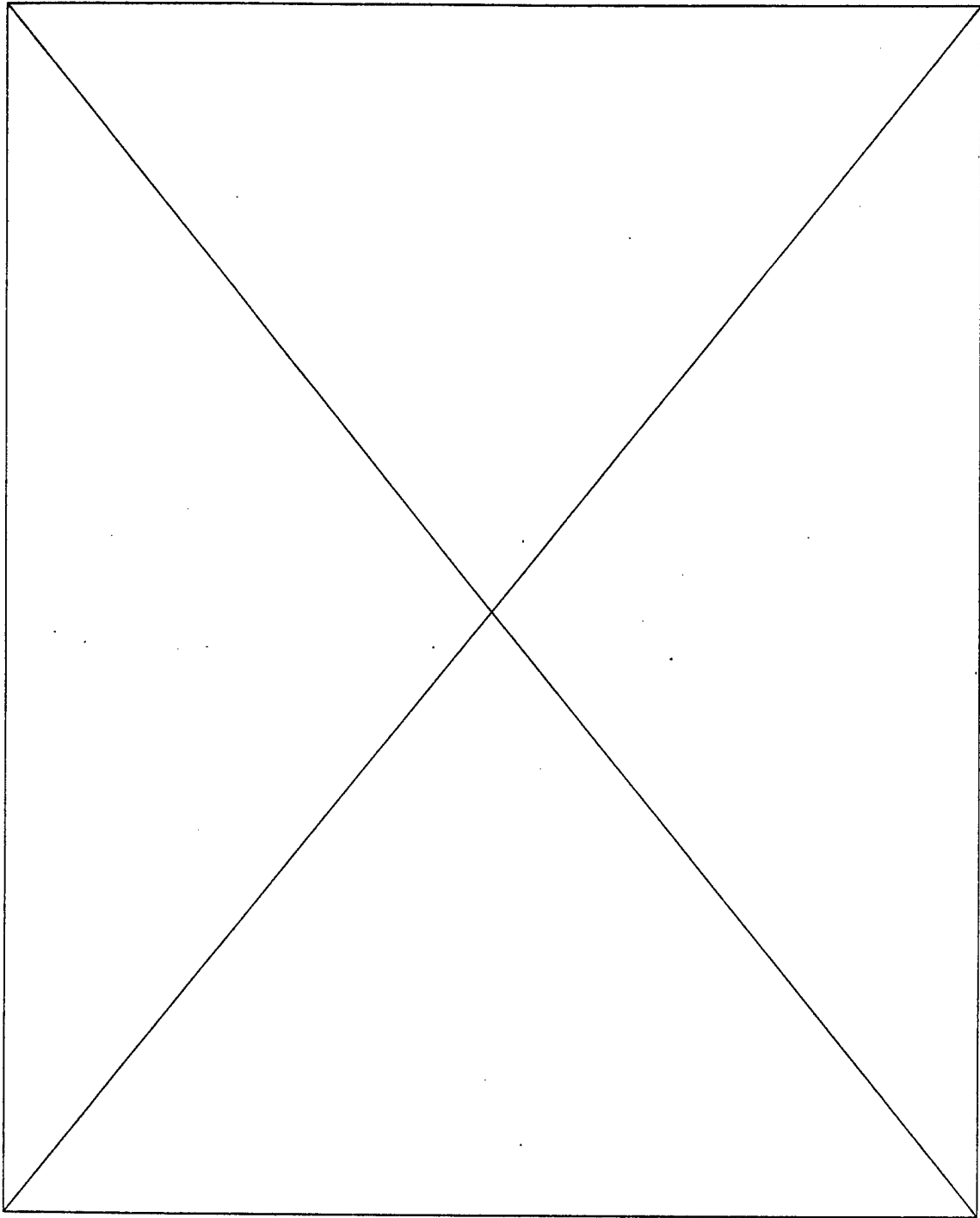
1 Pictures Tested  
35 Elements Tested  
776 Octets Tested

0 Illegal CGM Elements	1000 -	1999
0 Incorrect CGM Element Lengths	2000 -	2999
0 CGM State Errors	3000 -	3499
1 Required CGM Elements Missing or Wrong	4000 -	4499
0 CGM Parameter Values Out of Range	6000 -	6499
0 CGM Structure Errors	7000 -	7499
1 *** CGM Errors Found (total)	***	
0 Profile State Errors	3500 -	3999
0 Illegal Profile Elements	4500 -	4999
3 Profile Parameter Values Out of Range	6500 -	6999
0 Profile Data Limits Exceeded	8500 -	8999
0 Other Profile Constraints Violated	9500 -	9999
3 *** Profile Violations Found (total)	***	
0 Warnings (Advisory Remarks)	20000 -	20999

4 distinct errors and warnings were reported.

===== End of Conformance Report =====

## 11.5 D001C002 - CGM-View



## 11.6 D001C002 - Harvard Graphics

